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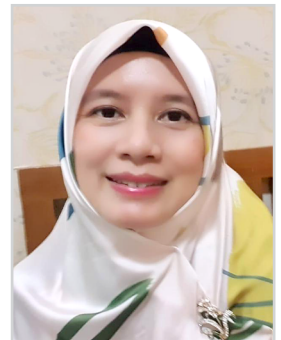
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The impact of knowledge management on the economic productivity of active projects in the stock exchange

Abstract. Improving productivity is one of the important solutions for ensuring economic growth and increasing the competitiveness of enterprises in many successful countries which has played an important role in achieving of their production growth. On the other hand, the development of the stock exchange is considered one of the crucial tools for achieving sustainable economic growth and increasing productivity. The purpose of this research is to investigate the effect of the acceptance of companies in the stock exchange on the technical efficiency (productivity) of the said companies. In this regard, 156 companies active in the stock exchange of Indonesia during the past 3 years and after the admission to the stock exchange have been determined. The research results showed that there is a significant relationship between knowledge management and economic productivity, and knowledge management can improve the efficacy and knowledge productivity up to 15% and 20%, respectively. The economic productivity of knowledge-based projects is effective and has a direct relationship.

Keywords: Economics; Stock Exchange; Productivity; Knowledge Management; Company; Performance
JEL Classifications: E24; E41; E64; I18; J28; J31

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1. Introduction

Business processes and the performance of economic enterprises can be affected by several factors, which according to the theory of quality management, compliance with international business standards in the field of quality and other fields is one of these factors. Nevertheless, the acceptance of this theoretical argument from an empirical point of view requires conducting appropriate research and experimental tests in this direction. The evidence obtained from the research shows that the profitability of the company is affected by various factors such as the size of the company, the competitiveness of the company and the mechanisms of corporate governance. However, in previous researches, the role of complying with international business standards or ISO in improving the company's profitability has not been considered (Paoloni et al., 2020; Razmara et al., 2022).

The most important goal of the company in the short term is to earn profit and the most important goal in the long term is to create value for the shareholders. The first goal is in the field of operational financial management and the second goal is in the field of strategic financial management. From the perspective of management theories, the most important goal of the company is to create money for shareholders in the present and future, hence, identifying strategies that improve this is important (Kunica et al., 2023). A wide range of theoretical discussions in management theories have focused on the relationship between business standards and profitability and as a result have declared that compliance with business standards is a very important factor in increasing profitability and improving organizational performance (Latif et al., 2020). In theoretical discussions related to management accounting, business standards (in various fields such as quality management) are considered as an intangible strategic resource that improves the company's performance and increases its profitability. In addition, compliance with business standards has been considered as a competitive advantage for organizations in many cases. Compliance with business standards improves business processes, thus reducing company costs and profitability (for example) argue that compliance with business standards by improving the decision-making process of managers and employees will improve time management and increase the timeliness of business processes and reduce production costs and increase quality (Ojo & Shittu, 2023). According to the above explanations, theoretically, it can be argued that compliance with international business standards is associated with an increase in the level of profitability of the company, and it reduces the time of processes, increases the quality of processes, and increases customer satisfaction improving the profitability of the company. However, accepting the above argument requires research and experimental tests in this field. The topicality of the present research lies in the importance of increasing the profitability of joint stock companies.

Jordão & Novas (2024), investigated the relationship between profit smoothing and the characteristics of the company was investigated with the data related to the time period of 2022-2023 and the analysis was done. Then, using the proposed model, smoothing and non-smoothing companies were separated from each other. The results showed that companies with a higher price-to-earnings ratio (P/E) had a greater incentive to report adjusted earnings. The most important goal of joint stock companies is to earn profit and create value for shareholders (Vrontis et al., 2021). Therefore, identifying the factors that improve profitability is important from an empirical point of view and leads to more detailed planning in order to increase the profitability of companies.

In this research, for the first time, the role of compliance with international business standards in the field of quality management on the profitability of companies active in the Indonesian Stock Exchange is discussed. Therefore, the current research has new achievements and adds new topics to the financial and accounting knowledge of management in this research field. Therefore, a strong motivation to conduct the research was formed and therefore the main hypothesis of the research was proposed as: There is a significant relationship between:

1. The creation of knowledge and the economic efficiency of the capital market.
2. Stock of knowledge and the economic efficiency of the capital market.
3. Application of knowledge and the economic efficiency of the capital market.
4. Knowledge participation and the economic efficiency of the capital market
5. Knowledge management and the economic efficiency of the capital market

2. Research Methodology

Based on the principles and theoretical reasoning stated, the research question of the current research is whether the business processes and the level of profitability of Indonesian companies are influenced by the observance of international business standards by these companies or not, and in order to answer the question above the International business standards in the field of quality management will be considered. The present research question is related to the theory of quality management, which states that a suitable quality management system increases the quality of products and increases customer satisfaction, and ultimately increases profitability.

The current research is based on the method of conducting an experimental research, based on the objective, it is an applied research and based on the nature of the data, it is a quantitative research. Statistical population and sampling in the current research, the companies admitted to the Indonesian Stock Exchange constitute the desired statistical population. Systematic elimination method was used for sampling. In this way, taking into account the statistical population (all companies admitted to the stock market until 2023) and the criteria as described below, a sample has been selected. They are used as examples in this research. The criteria used to select a sample from the statistical population are as follows:

1. Companies that are present in the stock exchange during the research period (2021-2023).
2. Companies that are not part of leasing and financial mediation companies.

In this research, in order to collect data, the field method and the questionnaire tool were used, and the response range used in it was 5-option Likert as: very much, much, moderate, low, very low. The tool for measuring knowledge management in this research is a researcher-made questionnaire, which was developed using questionnaire of Dahiyat et al. (2023). This questionnaire has 7 items for creating knowledge, 7 items for storing knowledge, 6 items for sharing knowledge, 5 items for applying and for economic productivity, based on the 5 spectrums. Statistical methods of data analysis include the multiple regression method, normality test (Kolmogorov Smirnov) and Autocorrelation test (Durbin-Watson).

By using multiple regression, it is possible to measure the effects of independent variables (knowledge management components) on dependent variables (incremental productivity indices of knowledge-based projects). In this research, simple regression, multiple regression, ANOVA and table of partial coefficients are used to test hypotheses. Before using multiple regression, correlation matrix has been used to detect the intensity of correlation between independent variables. In the multiple regression model of the test, «Durbin» measures the residual autocorrelation of the model H0. This value is between 0 and 4, although the obtained numbers are closer to 2, it shows that the autocorrelation is less, as a result of the model's answer. Regression is closer to reality.

3. Results

In order to examine the general and basic characteristics of the variables for the estimation and estimation of the model and their detailed analysis, it is necessary to estimate the descriptive statistics related to the variables. The most important central feature of a distribution is the mean and the most important feature of its dispersion is the variance of the distribution. By means of these specifications, one can get a general idea about the values of each of the variables. In this research, the amount of descriptive statistics of the variables under investigation is presented in the tables. As can be seen from Table 1, the average rank of the answers given to the questions related to knowledge management in the company is 3.74, which is more than the average 3 and this shows that there is a relationship between knowledge management and economic productivity.

Table 1:
A list of quantitative indicators to measure knowledge management in the company

| Variable | AVE | SD | Variance | Min | Max | 1 st quarter | 2 nd quarter |
|-----------------------|------|------|----------|------|------|-------------------------|-------------------------|
| Knowledge creation | 3.85 | 0.03 | 0.28 | 1.88 | 4.94 | 3.5 | 4.50 |
| Sharing knowledge | 3.82 | 0.04 | 0.61 | 2.01 | 5.00 | 3.0 | 4.00 |
| Knowledge Application | 3.99 | 0.05 | 0.62 | 1 | 5.00 | 3.5 | 4.50 |
| Knowledge storage | 3.98 | 0.05 | 0.44 | 1 | 5.00 | 3.5 | 4.50 |
| Economic productivity | 3.23 | 0.04 | 0.76 | 1 | 5.00 | 3.0 | 4.00 |

Source: Authors' own research

In this section, the hypotheses are analyzed. In order to test the analysis of the first sub-hypothesis, first regression assumptions were examined. Test of error independence is given in Table 2.

As can be seen in Table 2, considering that Durbin Watson's camera, all the hypotheses are between 1.5 and 2.5, so the hypotheses are accepted, which indicates that the errors are independent from each other. According to the first sub-hypothesis, it was claimed that there is a significant relationship between knowledge creation and economic productivity of knowledge-based projects. According to the second sub-hypothesis, it was claimed that there is a significant relationship between knowledge storage and economic productivity of knowledge-based projects. According to the third sub-hypothesis, it was claimed that there is a significant relationship between the application of knowledge and the economic productivity of knowledge-based projects. According to the fourth sub-hypothesis, it was claimed that there is a significant relationship between knowledge participation and the economic productivity of knowledge-based projects. According to the fourth sub-hypothesis, it was claimed that there is a significant relationship between knowledge participation and economic productivity of knowledge-based projects. These hypotheses are presented as statistical hypotheses (see Table 3).

Table 2:
Error independence results (Durbin-Watson)

| Hypothesis | Variable | Durbin-Watson | Correlation coefficient |
|------------|-----------------------|---------------|-------------------------|
| H1 | Knowledge creation | 2.43 | 0.045 |
| H2 | Knowledge storage | 1.92 | 0.049 |
| H3 | Knowledge Application | 1.88 | 0.049 |
| H4 | Sharing knowledge | 1.76 | 0.049 |
| H5 | Knowledge Management | 2.49 | 0.049 |

Source: Authors' own research

Table 3:
Regression and correlation coefficients

| Hypothesis | Correlation coefficient | Determination Coefficient | Error, p-value | SD |
|------------|-------------------------|---------------------------|----------------|-------|
| H1 | 0.55 | 0.33 | 0.040 | 0.302 |
| H2 | 0.56 | 0.38 | 0.010 | 0.210 |
| H3 | 0.51 | 0.26 | 0.000 | 0.290 |
| H4 | 0.58 | 0.38 | 0.000 | 0.261 |
| H5 | 0.68 | 0.44 | 0.000 | 0.092 |

Source: Authors' own research

As can be seen in Table 3, the value of the correlation coefficient for the first to fourth hypotheses and the main hypothesis is equal to 0.54, 0.63, 0.5, 0.6 and 0.67 respectively, which according to the classification of correlation coefficients, the obtained correlation coefficient is high. Also, considering that the error level for all 5 assumptions is less than 0.05, the statistical assumptions are confirmed. In other words, knowledge management has a positive effect on economic productivity at a significant level of 99%. The determination coefficient of 45% indicates that knowledge management explains 45% of changes in economic productivity.

Finally, regression analysis was performed for the hypotheses and its results are presented in Table 4. As can be seen in Table 4 considering that the error level is less than 0.05, we conclude that there is a significant relationship.

Table 4:
Regression analysis for the hypothesis results

| No | Model | Unstandardized coefficients | | Standard Beta | t | sig |
|----|-----------------------|-----------------------------|------|---------------|-------|------|
| | | B | SD | | | |
| H1 | Constant 1 | 11.22 | 1.87 | 0.62 | 6.11 | 0.00 |
| | Knowledge creation | 0.712 | 0.30 | | 2.31 | 0.04 |
| H2 | Constant 1 | 11.88 | 1.01 | 0.601 | 11.21 | 0.00 |
| | Knowledge Storage | 0.282 | 0.20 | | 1.38 | 0.01 |
| H3 | Constant 1 | 22.01 | 2.52 | 0.325 | 9.14 | 0.00 |
| | Knowledge Application | 0.344 | 0.29 | | 1.15 | 0.00 |
| H4 | Constant 1 | 31.98 | 3.76 | 0.315 | 8.67 | 0.00 |
| | Knowledge | 0.402 | 0.26 | | 1.65 | 0.00 |
| H5 | Constant 1 | 1.19 | 0.51 | 0.32 | 2.31 | 0.00 |
| | Knowledge | 0.56 | 0.10 | | 3.40 | 0.00 |

Source: Authors' own research

By performing multiple regression, the impact of different components of knowledge management on productivity is also shown in Table 4. According to this table, all knowledge management components have a positive effect on economic productivity and the coefficients are significant at the 99% level.

It can be concluded that the level of competitiveness of the company in the product market is higher than other companies in companies that comply with international business standards in the field of quality management and benefit from knowledge management and storage in their structure. And the reason for this is that knowledge management improves the status and position of the company in the product market, and finally, this flow allows companies to have a higher influence on the pricing of products in the industry, and as a result of this flow, the operating profit margin The company (index of the company's competitiveness in the product market) is upgraded. The results and findings of the test of this hypothesis are in line with the findings of previous research conducted in the field of international business standards (Zhumashov et al., 2023; Arifin et al., 2023; Ode & Ayavoo, 2020). The findings and results of previous researches show that the use of knowledge management and knowledge storage in the performance of stock exchange firms increases the competitiveness and improves the performance of economic enterprises.

4. Conclusion

Capital markets, especially its efficient form, play an important role in the optimal allocation of economic resources to the extent that allocation efficiency is considered as one of the types of capital market efficiency, therefore, the expansion of the capital market from a quantitative and qualitative perspective can increase the efficiency of production and service enterprises, and this It will lead to the growth of efficiency and productivity at the macroeconomic level. In this research, the economic productivity in the stock exchange has been measured with the approach of statistical data analysis, which is considered a comprehensive approach in measuring efficiency. According to the findings of this research, it can generally be concluded that the financial behavior of companies active in the Indonesian stock market is affected by compliance with international business standards in the field of quality management and the above standards (environmental standards, quality services and products, human resources, energy, social activities, customer satisfaction) in Indonesia has the necessary effectiveness and improves the financial performance, value creation and efficiency of companies According to the findings of the main hypothesis test of the research, based on the direct effect of knowledge management on the company's stock market value and its profitability, it can be concluded that the stock market value of companies that meet international business standards in the field of quality management comply more, they have more market value, which can be an endogenous factor (increasing profitability and thus increasing value), and an exogenous factor (more attention of the capital market and shareholders to these companies).

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